Southern Nuclear

Michael J. Yox
Regulatory Affairs Director
Vogtle 3 & 4

7825 River Road
Waynesboro, GA 30830
706-848-6459 tel

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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 3
ITAAC Closure Notification on Completion of ITAAC 2.2.02.02a [Index Number 120]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 3 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.2.02.02a [Index Number 120]. This ITAAC requires inspections, tests, and analyses be performed and documented to ensure the Passive Containment Cooling System (PCS) components and piping listed in the Combined License (COL) Appendix C, Table 2.2.2-1 and Table 2.2.2-2 that are identified as American Society of Mechanical Engineers (ASME) Code Section III or Functional Capability Required are designed and constructed in accordance with applicable requirements. The closure process for this ITAAC is based on the guidance described in Nuclear Energy Institute (NEI) 08-01, *Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52*, which was endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Kelli A. Roberts at 706-848-6991.

Respectfully submitted,

Michael J. Yox
Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3
Completion of ITAAC 2.2.02.02a [Index Number 120]

MJY/JRV/sfr

To:
Southern Nuclear Operating Company/ Georgia Power Company
Mr. Peter P. Sena III
Mr. D. L. McKinney
Mr. H. Nieh
Mr. G. Chick
Mr. S. Stimac
Mr. P. Martino
Mr. J.B. Williams
Mr. M. J. Yox
Mr. A. S. Parton
Ms. K. A. Roberts
Ms. J.M. Coleman
Mr. C. T. Defnall
Mr. C. E. Morrow
Mr. K. J. Drudy
Mr. J. M. Fisher
Mr. R. L. Beilke
Mr. S. Leighty
Ms. A. C. Chamberlain
Mr. J. C. Haswell
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cc:
Nuclear Regulatory Commission
Ms. M. Bailey
Mr. M. King
Mr. G. Bowman
Ms. A. Veil
Mr. C. P. Patel
Mr. G. J. Khouri
Mr. C. J. Even
Mr. B. J. Kemker
Ms. N. C. Coovert
Mr. C. Welch
Mr. J. Gaslevic
Mr. O. Lopez-Santiago
Mr. G. Armstrong
Mr. M. Webb
Mr. T. Fredette
Mr. C. Santos
Mr. B. Davis
Mr. J. Vasquez
Mr. J. Eargle
Mr. T. Fanelli
Ms. K. McCurry
Mr. J. Parent
Mr. B. Griman
Mr. V. Hall

Oglethorpe Power Corporation
Mr. R. B. Brinkman
Mr. E. Rasmussen

Municipal Electric Authority of Georgia
Mr. J. E. Fuller
Mr. S. M. Jackson

Dalton Utilities
Mr. T. Bundros

Westinghouse Electric Company, LLC
Dr. L. Oriani
Mr. D. C. Durham
Mr. M. M. Corletti
Mr. J. L. Coward
Ms. Z.S. Harper

Other
Mr. S.W. Kline, *Bechtel Power Corporation*
Ms. L. Matis, *Tetra Tech NUS, Inc.*
Dr. W. R. Jacobs, Jr., Ph.D., *GDS Associates, Inc.*
Mr. S. Roetger, *Georgia Public Service Commission*
Ms. R.L. Trokey, *Georgia Public Service Commission*
Mr. K. C. Greene, *Troutman Sanders*
Mr. S. Blanton, *Balch Bingham*

Southern Nuclear Operating Company
ND-21-0769
Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 3
Completion of ITAAC 2.2.02.02a [Index Number 120]

ITAAC Statement

Design Commitment:

2.a) The components identified in Table 2.2.2-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements.

2.b) The pipelines identified in Table 2.2.2-2 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements.

3.a) Pressure boundary welds in components identified in Table 2.2.2-1 as ASME Code Section III meet ASME Code Section III requirements.

3.b) Pressure boundary welds in the pipelines identified in Table 2.2.2-2 as ASME Code Section III meet ASME Code Section III requirements.

4.a) The components identified in Table 2.2.2-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.

4.b) The pipelines identified in Table 2.2.2-2 as ASME Code Section III retain their pressure boundary integrity at their design pressure.

5.b) Each of the pipelines identified in Table 2.2.2-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.

Inspections, Tests, Analyses:

Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.

Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.

A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested.

Inspection will be performed for the existence of a report concluding that the as-built pipelines meets the requirements for functional capability.

Acceptance Criteria:

The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.2.2-1 and 2.2.2-2 as ASME Code Section III.

A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds.

A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.2.2-1 and 2.2.2-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.

A report exists and concludes that each of the as-built pipelines identified in Table 2.2.2-2 for which functional capability is required meets the requirements for functional capability.

ITAAC Determination Basis

This ITAAC requires inspections, tests, and analyses be performed and documented to ensure the Passive Containment Cooling System (PCS) components and piping listed in the Combined License (COL) Appendix C, Table 2.2.2-1 (Attachment A) and Table 2.2.2-2 (Attachment B) that are identified as American Society of Mechanical Engineers (ASME) Code Section III or Functional Capability Required are designed and constructed in accordance with applicable requirements.

2.a and 2.b) The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.2.2-1 and 2.2.2-2 as ASME Code Section III.

Each component listed in Table 2.2.2-1 as ASME Code Section III was fabricated in accordance with the VEGP Updated Final Safety Analysis Report (UFSAR) and the ASME Code Section III requirements. The ASME Code Section III certified Design Reports for these components exist and document that the as-built components conform to the approved design details. The ASME Section III Design Report for each component was documented in the component's completed ASME Section III Code Data Report. The individual component ASME Section III Code Data Reports are documented on the ASME Section III N-5 Code Data Report(s) for the applicable piping system (Reference 1).

The as-built piping listed in Table 2.2.2-2 including the components listed in Table 2.2.2-1 as ASME Code Section III, were subjected to a reconciliation process (Reference 2), which verifies that the as-built piping are analyzed for applicable loads (e.g. stress reports) and for compliance with all design specification and Code provisions. Design reconciliation of the as-built systems, including installed components, validates that construction completion, including field changes and any nonconforming condition dispositions, was consistent with and bounded by the approved design. All applicable fabrication, installation and testing records, as well as, those for the related Quality Assurance (QA) verification/ inspection activities, which confirm adequate construction in compliance with the ASME Code Section III and design provisions, are referenced in the N-5 data report and/or its sub-tier references.

The applicable ASME Section III N-5 Code Data Report(s), which include the location of the certified Design Reports for all the components listed in Table 2.2.2-1 (Attachment A) and piping listed in Table 2.2.2-2 (Attachment B) as ASME Code Section III, exist and conclude that these installed components are designed and constructed (including their installation within the applicable as-built piping system) in accordance with the ASME Code (1998 Edition, 2000 Addenda and 1989 Edition, 1989 Addenda), Section III requirements as applicable, as described in UFSAR Subsection 5.2.1 (Reference 3). The N-5 Code Data Reports for the piping system(s) containing the components listed in the Table 2.2.2-1 and Table 2.2.2-2 are identified in Attachments A and B, respectively.

3.a and 3.b) A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds.

Inspections were performed in accordance with ASME Code Section III (1998 Edition, 2000 Addenda) to demonstrate that as-built pressure boundary welds in components identified in Table 2.2.2-1 as ASME Code Section III met ASME Code Section III requirements (i.e., no unacceptable indications).

The applicable non-destructive examinations (including liquid penetrant, magnetic particle, radiographic, and ultrasonic testing, as required by ASME Code Section III) of the components' pressure boundary welds are documented in the Non-destructive Examination Report(s), which support completion of the respective ASME Section III N-5 Code Data Report(s) certified by the Authorized Nuclear Inspector, as listed in Attachment A.

Per ASME Code Section III, Subarticle NCA-8300, "Code Symbol Stamps," the N-5 Code Data Report(s) (Reference 1) documents satisfactory completion of the required examination and testing of the item, which includes non-destructive examinations of pressure boundary welds. Satisfactory completion of the non-destructive examination of pressure boundary welds ensures that the pressure boundary welds in components identified in Table 2.2.2-1 as ASME Code Section III met ASME Code Section III requirements.

An inspection was performed in accordance with Reference 2 to demonstrate that the as-built pressure boundary welds in piping identified in Table 2.2.2-2 (Attachment B) as ASME Code Section III met ASME Code Section III requirements (i.e., no unacceptable indications). This portion of the ITAAC was completed when the piping identified in Table 2.2.2-2, which is encompassed within the respective piping system Code Symbol N-Stamp and the corresponding piping system Code N-5 Data Report Form(s) (Reference 1), was completed. The non-destructive examinations (including visual inspection, liquid penetrant, magnetic particle, radiographic, and ultrasonic testing, as required by ASME Code Section III) of the piping pressure boundary welds are documented in the Non-destructive Examination Report(s) within the piping system's supporting data package, which support completion of the respective Code Stamping and Code N-5 Data Report(s). The completion of stamping the respective piping system along with the corresponding ASME Code N-5 Data Report Form(s) (certified by the Authorized Nuclear Inspector) ensure that the piping is constructed in accordance with the design specification(s) and the ASME Code Section III and that the satisfactory completion of the non-destructive examinations of piping pressure boundary welds for the pipe lines identified in Table 2.2.2-2 met ASME Code Section III requirements and were documented in the Non-destructive Examination Report(s) within the supporting data packages.

4.a and 4.b) A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.2.2-1 and 2.2.2-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.

A hydrostatic test was performed by the vendor to demonstrate that the components identified in Table 2.2.2-1 (Attachment A) as ASME Code Section III retain their pressure boundary integrity at their design pressure. The completion of the N-5 Data Reports was governed by Reference 2.

This portion of the ITAAC was completed once each component identified in Table 2.2.2-1 had their individual Code Symbol N-Stamp and corresponding Code Data Report (Reference 1)

completed, and the components were installed into the respective Code Symbol N-Stamped piping system and documented on the corresponding N-5 Code Data Report(s) (Reference 1). The hydrostatic testing results of the component's pressure boundary were documented in the Hydrostatic Testing Report(s) within the supporting component's data package, which support completion of the respective Code Stamping and Code Data Report(s).

The completion of stamping the individual components and the respective piping system along with the corresponding ASME Code Data Reports (certified by the Authorized Nuclear Inspector) ensures that the components were constructed in accordance with the Design Specifications and the ASME Code Section III and that the satisfactory completion of the hydrostatic pressure testing of each component identified in Table 2.2.2-1 as ASME Code Section III were documented in the Hydrostatic Testing Report(s) within the supporting data packages and met ASME Code Section III requirements.

This ITAAC also verifies that the piping identified in Table 2.2.2-2 (Attachment B) fully meets all applicable ASME Code, Section III requirements and retains its pressure boundary integrity at its design pressure.

Hydrostatic tests were performed in accordance with procedures identified in Reference 1 (as applicable) that complies with the ASME Code (1998 Edition, 2000 Addenda), Section III requirements to demonstrate that the ASME Code Section III piping identified in Table 2.2.2-2 retains its pressure boundary integrity at its design pressure.

A hydrostatic test verified that there are no leaks at welds or piping, and that the pressure boundary integrity was retained at its design pressure. The hydrostatic testing results of the pipe lines are documented in the Hydrostatic Testing Report(s). The Hydrostatic Testing Report(s) supports completion of the ASME Section III N-5 Code Data Report(s) for the applicable piping system (i.e., PCS) (Reference 1).

The applicable ASME Section III N-5 Code Data Report(s) (Reference 1) identified in Attachments A and B documents that the results of the hydrostatic testing of the components and piping identified in Table 2.2.2-1 and Table 2.2.2-2 respectively conform with the requirements of the Code (1998 Edition, 2000 Addenda), Section III.

5.b) A report exists and concludes that each of the as-built lines identified in Table 2.2.2-2 for which functional capability is required meets the requirements for functional capability.

An inspection was performed of the ASME Section III as-built piping design report (Reference 4) to verify that the report demonstrates that each of the PCS piping lines identified in ITAAC Table 2.2.2-2 that requires functional capability was designed to withstand combined normal and seismic design basis loads without a loss of its functional capability. "Functional capability," in this context, refers to the capability of the piping to withstand the effects of earthquakes, without a loss of safety function (to convey fluids from one location to another). Specific functional capability requirements are defined in the VEGP UFSAR Table 3.9-11 (Reference 3).

Piping functional capability was not a specific ASME Code requirement but it is a requirement in the VEGP UFSAR (Reference 3). As such, information demonstrating that UFSAR functional capability requirements are met is included in the ASME Section III As-Built Design Reports for safety class piping prepared in accordance with ASME Section III NCA-3550 under the ASME Boiler & Pressure Vessel Code (1998 Edition, 2000 Addenda) Section III requirements. The

as-built piping systems were subjected to a reconciliation process (Reference 2), which verifies that the as-built piping systems were analyzed for functional capability and for compliance with the design specification and ASME Code provisions. Design reconciliation of the as-built systems validates that construction completion, including field changes and any nonconforming condition dispositions, was consistent with and bounded by the approved design. As required by ASME Code, the As-Built Design Report includes the results of physical inspection of the piping and reconciliation to the design pipe stress report.

Inspections of the ASME Code Section III As-Built Piping Design Reports (Reference 4) for the PCS piping lines identified in Table 2.2.2-2 were completed and conclude that each of the as-built PCS piping lines for which functional capability was required met the requirements for functional capability. The ASME Section III As-Built Piping Design Reports for each of the as-built PCS piping lines in Table 2.2.2-2 are identified in Attachment B.

References 1 and 4 provide the evidence that the following ITAAC Acceptance Criteria requirements were met:

- The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.2.2-1 and 2.2.2-2 as ASME Code Section III;

- A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds;

- A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.2.2-1 and 2.2.2-2 as ASME Code Section III conform with the requirements of the ASME Code Section III; and

- A report exists and concludes that each of the as-built pipelines identified in Table 2.2.2-2 for which functional capability are required meet the requirements for functional capability.

This ITAAC also verified that the Preservice Inspection (PSI) examinations for the applicable portions of the Class 3 Passive Containment Cooling System (PCS) components and piping identified in Tables 2.2.2-1 and 2.2.2-2 were completed (Reference 7), in accordance with the Unit 3 PSI program plan (Reference 5), and that the results of the PSI conforms with the requirements of the ASME Boiler and Pressure Vessel (B&PV) Code.

References 1 and 4 are available for NRC inspection as part of the Unit 3 ITAAC 2.2.02.02a Completion Package (References 6).

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review, which included now consolidated ITAAC Indexes 121, 122, 123, 124, 125, and 129, found no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.2.02.02a (Reference 6) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.2.02.02a was performed for VEGP Unit 3 and that the prescribed acceptance criteria were met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

References (available for NRC inspection)

1. SV3-PCS-MUR-001, Rev. 0, "AP1000 Vogtle Unit 3 ASME Section III System Code Data Report for the Passive Containment Cooling System (PCS)"

2. APP-GW-GAP-139, Rev. 7, "Westinghouse/Stone & Webster ASME Code Data Report As-Built Documentation Interface Procedure"

3. VEGP 3&4 Updated Final Safety Analysis Report, Rev. 10.1, Subsection 5.2.1, Compliance with Codes and Code Cases
    a. Subsection 5.2.1 - Compliance with Codes and Code Cases
    b. Table 3.9-11 - Piping Functional Capability – ASME Class 1, 2, and 3

4. SV3-PCS-S3R-001, Rev. 0, "Vogtle Unit 3 Passive Containment Cooling System ASME Section III As-Built Piping System Design Report"

5. SV3-GW-GEI-100, Rev. 2, "AP1000 Preservice Inspection Program Plan for Vogtle Unit 3"

6. 2.2.02.02a-U3-CP-Rev0, ITAAC Completion Package

7. APE-10-00018, "Unit 3 - Completion of Preservice Inspection for PCS Class 1, 2, and 3 Portions"

Attachment A

SYSTEM: Passive Containment Cooling System (PCS)

Equipment Name*	Tag No.*	ASME Code Section III*	ASME III As-built Design Report	N-5 Report
PCCWST Isolation Valve	PCS-PL-V001A	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Isolation Valve	PCS-PL-V001B	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Isolation Valve MOV	PCS-PL-V001C	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Isolation Block MOV	PCS-PL-V002A	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Isolation Block MOV	PCS-PL-V002B	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Isolation Block MOV	PCS-PL-V002C	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCS Recirculation Return Isolation Valve	PCS-PL-V023	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Supply to Fire Protection System Isolation Valve	PCS-PL-V005	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCS Makeup to SFS Isolation Valve	PCS-PL-V009	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
Water Makeup Isolation Valve	PCS-PL-V044	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
Water Bucket Makeup Line Drain Valve	PCS-PL-V015	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
Water Bucket Makeup Line Isolation Valve	PCS-PL-V020	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Long-Term Makeup Line Check Valve	PCS-PL-V039	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Long-Term Makeup Drain Isolation	PCS-PL-V042	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCS Discharge to SFS Pool Isolation Valve	PCS-PL-V045	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
Recirc Header Discharge to PCCWST Isolation Valve	PCS-PL-V046	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Drain Isolation Valve	PCS-PL-V049	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
Recirc Header Discharge to SFS Pool Isolation Valve	PCS-PL-V050	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001
PCCWST Discharge to SFS Pool Isolation Valve	PCS-PL-V051	Yes	SV3-PCS-S3R-001	SV3-PCS-MUR-001

***Excerpts from COL Appendix C, Table 2.2.2-1**

Attachment B

SYSTEM: Passive Containment Cooling System (PCS)

Pipeline Name**	Line No.**	ASME Code Section III**	Functional Capability Required**	ASME III As-Built Design Report	N-5 Report
PCCWST Discharge Lines	PCS-PL-L001A/B+/C/D+	Yes	Yes	SV3-PCS -S3R-001	SV3-PCS-MUR-001
PCCWST Discharge Cross-connect Line	PCS-PL-L002	Yes	Yes	SV3-PCS -S3R-001	SV3-PCS-MUR-001
PCCWST Discharge Header Lines	PCS-PL-L003A/B PCS-PL-L005	Yes	Yes	SV3-PCS -S3R-001	SV3-PCS-MUR-001
Post-72-hour Supply Line Connection	PCS-PL-L051 PCS-PL-L054 PCS-PL-L065+	Yes	Yes	SV3-PCS -S3R-001	SV3-PCS-MUR-001
Post-72-hour Containment Cooling Makeup From Supply Line Connections	PCS-PL-L004 PCS-PL-L007 PCS-PL-L008 PCS-PL-L023 PCS-PL-L050+	Yes	Yes	SV3-PCS -S3R-001	SV3-PCS -MUR-001
Post-72-hour SFS Makeup From PCCWST	PCS-PL-L011 PCS-PL-L017 PCS-PL-L018 PCS-PL-L030*+ PCS-PL-L039* PCS-PL-L041+ PCS-PL-L049*+ PCS-PL-L073+	Yes	Yes	SV3-PCS -S3R-001	SV3-PCS -MUR-001
Post-72-hour SFS Makeup From Supply Line Connection	PCS-PL-L025 PCS-PL-L029 PCS-PL-L030*+ PCS-PL-L039* PCS-PL-L048 PCS-PL-L049*+ PCS-PL-L052+	Yes	Yes	SV3-PCS -S3R-001	SV3-PCS -MUR-001

*** Lines PCS-PL-L049, L039, and L030 comprise a common makeup line from both sources.**

****Excerpts from COL Appendix C, Table 2.2.2-2**

+These lines PCS-PL-L001B/D, L065, L050, L030, L041, L049, L073, and L052 require that dynamic loads in its pipe stress analysis satisfy the requirements of ASME Code Section III (1989 Edition, 1989 Addenda) for girth fillet welds between piping and socket welded fittings, valves and flanges per VEGP UFSAR Section 5.2.1.1 (Reference 3).